AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

30. (Currently Amended) A network device for use in a communication system, the network device having a predetermined period of time during which, if no communication is received from a mobile communication unit, the network device ends an established connection with the mobile communication unit, the network device comprising:

a processor operative to control the network device;

a transceiver coupled to the processor, the transceiver operative to transmit and receive information between the mobile communication unit and the network device upon a connection being established between the mobile communication unit and the network device; and

wherein the processor of the network device periodically receives an unsolicited transparent keepalive packet from the mobile communication unit at predetermined intervals, the keepalive packet serving to reset the predetermined period of time such that the network device does not end the established connection.

31. (Cancelled).

32. (Previously Presented) The network device of claim 30, the predetermined period of time being determined by a keepidle timer.

33. (Previously Presented) The network device of claim 32, the network device sending a keepalive probe upon expiration of the keepidle timer and ending the connection if a response is not received by the mobile communication unit in a predetermined response period wherein the keepalive packet acts as a response resetting at least one of the keepidle timer and the predetermined response period.

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34. (Previously Presented) The network device of claim 30, the predetermined period of time comprising the time it takes for a keepidle timer to expire, a keep alive probe to be sent upon expiration of the keepidle timer and a predetermined response time for the mobile communication unit to respond to the keep alive probe to expire.

35. (Previously Presented) The network device of claim 30, wherein the keepalive packet transmitted from the mobile communication unit to the network device serves solely to reset the predetermined period of time so that the network device does not end the connection.

36. (Previously Presented) The network device of claim 30, wherein the network device periodically receives the keepalive packet from the mobile communication unit in time intervals which are less then the predetermined time set by the network device.

37. (Previously Presented) The network device of claim 30, wherein the mobile communication unit and the network device communicate using a TCP protocol.

38. (Previously Presented) The network device of claim 30, the network device being a host computer.

39. (Previously Presented) A keepalive packet for use in a communication system, the keepalive packet serving to reset a predetermined period of time that a network device ends a connection with a mobile communication unit, the keepalive packet comprising:

a preamble field having synchronizing bits for allowing the network device to synchronize to the packet; a header field following the preamble field;

a source address field holding the address of the mobile communication unit from which the packet originates;

a destination field holding the address of the network device for which the packet is directed;

a sending sequence field relating to the number of bytes of the packet;

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a last sequence field provided to allow the network device to determine the last sequence number sent by the network device to the mobile communication unit; and

error correction field provided to allow the network device to determine if it has properly received the packet.

40. (Previously Presented) The keepalive packet of claim 39, the header field containing information of at least one of packet length, packet type and temporary identification of the mobile communication unit.

41. (Previously Presented) The keepalive packet of claim 39, further comprising a number representative of a random starting number chosen by the mobile communication unit plus the number of bytes of data inside the packet.

42. (Previously Presented) The keepalive packet of claim 39, the sending sequence field comprising a number one less than a sending sequence number expected by the network device.

43. (Previously Presented) The keepalive packet of claim 42, wherein by sending a sequence field comprising a number one less than a sending sequence number expected by the network device causes the network device to immediately return an acknowledgment packet to the mobile communication unit.

44. (Previously Presented) The keepalive packet of claim 42, wherein by sending a sequence field comprising a number one less than a sending sequence number expected by the network device causes the network device to not advance the sequence number of the network device, such that the synchronization state between the mobile communication unit and the network device is not changed.

45. (Previously Presented) The keepalive packet of claim 39, the sending sequence field comprising a number equal to the last number stored in a stack of the mobile communication unit plus the number of bytes of the packet.

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46. (Previously Presented) The network device of claim 39, wherein the packet is transmitted using a TCP protocol.

47. (Currently Amended) A method for maintaining a connection between a network device and a mobile communication unit, comprising:

ending the connection by the network device if no communication is received from the mobile communication unit for a predetermined period of time; and

transmitting a keepalive packet from the mobile communication unit to the network device, the keepalive packet serving to reset the predetermined period of time so that the network device does not end the connection and is transparent to the network device.

48. (Currently Amended) A mobile communication unit for use in a communication system, the communication system including a network device, the network device having a predetermined period of time during which, if no communication is received from the mobile communication unit, the network device ends an established connection with the mobile communication unit, the mobile communication unit comprising:

a processor operative to control the mobile communication unit;

a transmitter coupled to the processor, the transmitter operative to transmit information to the network device upon a connection being established between the mobile communication unit and the network device; and

wherein the processor of the mobile communication unit transmits a transparent keepalive packet to the network device, the keepalive packet serving to reset the predetermined period of time so that the network device does not end the established connection.

49. (Currently Amended) A communication system comprising:

a mobile client;

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a network device adapted to determine if no communication from the mobile client is received for a predetermined period of time during a connection and ending the connection with the mobile client if the predetermined period of time expires prior to the network device receiving communication from the mobile client; and

wherein the mobile client transmits a keepalive packet to the network device, the keepalive packet serving to reset the predetermined period of time so that the network device does not end the connection, the keepalive packet transparent to the network device.

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